SPEC® CINT2006 Result

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Bull SAS

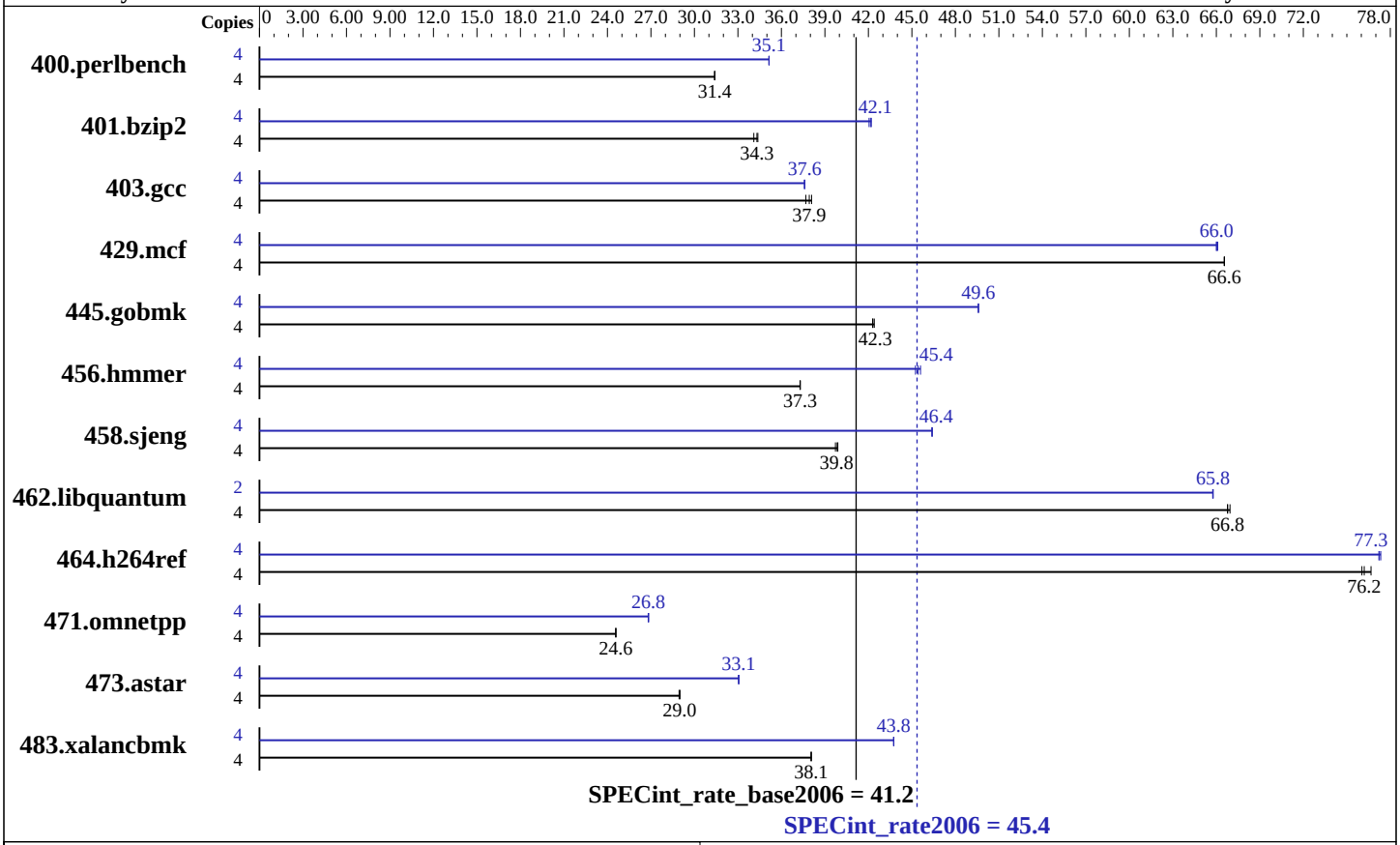
Bull Escala PL260 (4.2 GHz, 2 cores)

SPECint®_rate2006 = 45.4

SPECint_rate_base2006 = 41.2

CPU2006 license: 20
Test sponsor: Bull SAS
Tested by: Bull SAS

Test date: Feb-2008
Hardware Availability: Mar-2008
Software Availability: Feb-2008



Hardware

CPU Name:	POWER6
CPU Characteristics:	
CPU MHz:	4200
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip, 2 threads/core
CPU(s) orderable:	2 cores
Primary Cache:	64 KB I + 64 KB D on chip per core
Secondary Cache:	4 MB I+D on chip per core
L3 Cache:	None
Other Cache:	None
Memory:	16 GB (8x2 GB) DDR2 667 MHz
Disk Subsystem:	2x73 GB SAS 15K RPM
Other Hardware:	None

Software

Operating System:	IBM AIX V6.1 Updated to SP3
Compiler:	XL C/C++ Enterprise Edition V9 for AIX Updated with the Oct2007 PTF.
Auto Parallel:	No
File System:	AIX/JFS2
System State:	Multi-user
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	--

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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	4	1245	31.4	1244	31.4	**1245**	**31.4**	4	**1112**	**35.1**	1112	35.1	1112	35.2
401.bzip2	4	**1125**	**34.3**	1132	34.1	1123	34.4	4	918	42.0	915	42.2	**916**	**42.1**
403.gcc	4	846	38.1	854	37.7	**849**	**37.9**	4	856	37.6	**856**	**37.6**	857	37.6
429.mcf	4	548	66.5	**548**	**66.6**	548	66.6	4	**553**	**66.0**	553	66.0	552	66.1
445.gobmk	4	992	42.3	989	42.4	**992**	**42.3**	4	846	49.6	**846**	**49.6**	846	49.6
456.hmmer	4	1001	37.3	1000	37.3	**1001**	**37.3**	4	**822**	**45.4**	818	45.6	825	45.2
458.sjeng	4	1213	39.9	**1215**	**39.8**	1218	39.7	4	**1043**	**46.4**	1044	46.4	1043	46.4
462.libquantum	4	1241	66.8	1238	66.9	**1241**	**66.8**	2	630	65.7	630	65.8	**630**	**65.8**
464.h264ref	4	1155	76.7	1164	76.0	**1162**	**76.2**	4	1146	77.2	1145	77.3	**1146**	**77.3**
471.omnetpp	4	1017	24.6	1017	24.6	**1017**	**24.6**	4	931	26.8	932	26.8	**932**	**26.8**
473.astar	4	970	28.9	**969**	**29.0**	968	29.0	4	**850**	**33.1**	849	33.1	850	33.0
483.xalancbmk	4	**725**	**38.1**	725	38.1	725	38.0	4	**631**	**43.8**	631	43.8	631	43.7

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

General Notes

```
See flags file of details on following settings.
all ulimits set to unlimited.
Envionment variables set before executing benchmarks:
  MALLOCOPTIONS=pool
  MEMORY_AFFINITY=MCM
  XLFRTEOPTS=intrinthds=1
System set to "Enhanced" mode when defining partition on HMC.
bindprocessor command used on submit to bind each copy to a
  unique processor.
500 16M large pages defined with vmo command
Remote console disabled in /etc/inittab.
fdpr binary optimization tool used for:
  400.perlbench 401.bzip2 403.gcc 429.mcf 456.hmmer
  458.sjent 462.libquantum 464.h264ref 473.astar
```

Base Compiler Invocation

C benchmarks:

```
/usr/vac/bin/xlc -qlanglvl=extc99
```

C++ benchmarks:

```
/usr/vacpp/bin/xlC
```

Base Portability Flags

400.perlbench: -DSPEC_CPU_AIX
462.libquantum: -DSPEC_CPU_AIX
464.h264ref: -DSPEC_CPU_AIX -qchars=signed
483.xalancbmk: -DSPEC_CPU_AIX

Base Optimization Flags

C benchmarks:
-bmaxdata:0x50000000 -O5 -qlargepage -D_ILS_MACROS -qalias=noansi -qalloca -blpdata

C++ benchmarks:
-bmaxdata:0x20000000 -O5 -qlargepage -D_ILS_MACROS -qrtti=all -blpdata

Base Other Flags

C benchmarks:
-qipa=noobject -qipa=threads -qsuppress=1500-036

C++ benchmarks:
-qipa=noobject -qipa=threads -qsuppress=1500-036

Peak Compiler Invocation

C benchmarks:
/usr/vac/bin/xlc -qlanglvl=extc99

C++ benchmarks:
/usr/vacpp/bin/xlC

Peak Portability Flags

400.perlbench: -DSPEC_CPU_AIX
403.gcc: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_AIX
464.h264ref: -DSPEC_CPU_AIX -qchars=signed
483.xalancbmk: -DSPEC_CPU_AIX

Peak Optimization Flags

C benchmarks:

400.perlbench: `-bmaxdata:0x50000000 -qpdf1`(pass 1) `-qpdf2`(pass 2) `-O4 -qlargepage -qenablevmx -qvecnvol -D_ILS_MACROS -qalias=noansi -qfdpr -blpdata`

401.bzip2: `-bmaxdata:0x4ffffffc -qpdf1`(pass 1) `-qpdf2`(pass 2) `-O5 -qlargepage -qenablevmx -qvecnvol -D_ILS_MACROS -qfdpr -blpdata`

403.gcc: `-qpdf1`(pass 1) `-qpdf2`(pass 2) `-O4 -qlargepage -D_ILS_MACROS -qalloca -qfdpr -q64 -blpdata`

429.mcf: `-bmaxdata:0x50000000 -O5 -qlargepage -qenablevmx -qvecnvol -D_ILS_MACROS -qfdpr -blpdata`

445.gobmk: `-qpdf1`(pass 1) `-qpdf2`(pass 2) `-O4 -qlargepage -qenablevmx -qvecnvol -D_ILS_MACROS -blpdata`

456.hmmer: `-O5 -qlargepage -D_ILS_MACROS -qfdpr -blpdata`

458.sjeng: `-qpdf1`(pass 1) `-qpdf2`(pass 2) `-O5 -qlargepage -qenablevmx -qvecnvol -D_ILS_MACROS -qfdpr -blpdata`

462.libquantum: `-qpdf1`(pass 1) `-qpdf2`(pass 2) `-O5 -qlargepage -qenablevmx -qvecnvol -D_ILS_MACROS -q64 -qfdpr -blpdata`

464.h264ref: `-qpdf1`(pass 1) `-qpdf2`(pass 2) `-O5 -q64 -D_ILS_MACROS -qenablevmx -qvecnvol -qfdpr -bdatapsize:64K -bstackpsize:64K -btextpsize:64K`

C++ benchmarks:

471.omnetpp: `-bmaxdata:0x20000000 -qpdf1`(pass 1) `-qpdf2`(pass 2) `-O5 -qlargepage -qenablevmx -qvecnvol -D_ILS_MACROS -qalign=natural -qrtti=all -qinlglue -blpdata`

473.astar: `-bmaxdata:0x20000000 -qpdf1`(pass 1) `-qpdf2`(pass 2) `-O5 -qlargepage -D_ILS_MACROS -qfdpr -qinlglue -qalign=natural -blpdata`

483.xalancbmk: `-bmaxdata:0x20000000 -qpdf1`(pass 1) `-qpdf2`(pass 2) `-O5 -qlargepage -D_ILS_MACROS -qinlglue -D__IBM_FAST_VECTOR -blpdata`

Peak Other Flags

C benchmarks:
```
-qipa=noobject -qipa=threads -qsuppress=1500-036
```

C++ benchmarks:
```
-qipa=noobject -qipa=threads -qsuppress=1500-036
```

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/CPU2006_flags.20090713.06.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/CPU2006_flags.20090713.06.xml

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